# THE ULTIMATE ASSERTION* 

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# EVIDENCE OF SUPERNATURAL DESIGN IN THE DIVINE PROLOGUE 

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#### Abstract

Our Bibles are translations of early documents written largely in Hebrew and Greek. Both languages are alphanumeric, i.e. their letters may be fairly read as numerals, and words as their sums. It is here demonstrated that the seven words of the Hebrew Bible's first verse are far more informative than has previously been supposed. They feature several 'one of a kind' numbers and imposing structures of coordinated numerical geometries; these provide persuasive support for this strategically-placed and powerful assertion, and thereby ratify it, and all that follows.


## 1. Introduction

The subject of our study is an ancient artefact that appears as first verse on the opening page of every Hebrew Bible and Torah ${ }^{1}$ scroll; it is a statement made by One who claims to be the Author of all things and thereby challenges all who believe otherwise concerning the origin of the Earth, the Cosmos and ourselves. Our purpose here is to test the strength of this claim - for much hinges upon it! What appears to have been overlooked by friend and foe alike is the alphanumeric nature of the Hebrew language, i.e. that its letters and words may be alternatively and fairly read as numbers. This implies, of course, that any would-be author of Hebrew text may engage with his readers on two semantic levels - one literal, the other numeric. In other words, those clever enough to accomplish such an extraordinary feat may use the precision of number to substantiate the associated text.
It was the Cabbalists (the 'mystics' of Judaism) who were the first to appreciate the opportunities offered by alphabetic numeration. Believing that God had anticipated (even engineered) this development, they were led to understand that words registering the same numerical value were, somehow, mystically related. Clearly, for them this practice - termed gematria - suggested new, divinely-directed, ways of interpreting the scriptures. However, their zeal for unearthing yet more numbers from Holy Writ led them to adopt a variety of non-standard methods for evaluating the words. This had the effect of degrading the practice; nevertheless, it continues to be used today in its many forms.
Clearly, for the purposes of the analyses conducted here it is necessary to look beyond Cabbalism and the symbolic methods that man has invented to facilitate his record keeping and arithmetic. We are thus led to view number as a countable absolute.

[^0]
## 2. Figurate Numbers

Certain numbers possess a symmetrical shape when represented as a close formation of uniform counters (circular or square, spherical or cubic, as appropriate). As a simple example, the triangular arrangement of the 15 'reds' which announces every game of snooker is a 2-D figurate number. Observe that the symbol ' 15 ' provides no hint of this. Such geometries occur in families as infinite sequences of integers. It suffices here that we confine our interest to the shapes represented in the following table - ignoring the degenerate first terms.

| Name | Generating Formula | First 8 Terms | OEIS |
| :---: | :---: | :---: | :---: |
| Triangle | $T(n)=n^{*}(n+1) / 2$ | $1,3,6,10,15,21,28,36 \ldots$ | A000217 |
| Square/Rhombus | $R(n)=n^{\wedge} 2$ | $1,4,9,16,25,36,49,64 \ldots$ | A000290 |
| Centred 9-gonal | $G(n)=9^{*} n^{*}(n-1) / 2+1$ | $1,10,28,55,91,136,190,253 \ldots$ | A060544 |
| Centred Hexagon | $H(n)=3^{*} n^{*}(n-1)+1$ | $1,7,19,37,61,91,127,169 \ldots$ | A003215 |
| Star | $S(n)=6^{*} n^{*}(n-1)+1$ | $1,13,37,73,121,181,253,337 \ldots$ | A003154 |
| Cube | $\mathrm{C}(\mathrm{n})=\mathrm{n}^{\wedge} 3$ | $1,8,27,64,125,216,343,512 \ldots$ | A000578 |

## TABle 1

Observe:

- n represents any positive integer; the operating symbols for multiplication, division and exponentiation are $*, /$ and ${ }^{\wedge}$, respectively
- the term 'Star' refers to the 6-pointed variety - the Hexagram
- the 'Centred 9-gonals' (also referred to as ' G - Triangles') are a subset of the Triangles; these possess the ability to generate Star/Hexagon-pairs by self-union/intersection
- the column labelled OEIS provides the catalogue reference used in the 'On-line Encyclopedia of Integer Sequences'
- as may be seen, figurate numbers are comparatively rare; here are some details:

| Name | $\mathbf{n} \leq \mathbf{1 0}$ |  | $\mathbf{n} \leq \mathbf{1 0 0}$ |  | $\mathbf{n} \leq \mathbf{1 0 0 0}$ |  | $\mathbf{n} \leq \mathbf{1 0 0 0 0}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | $\%$ | Total | $\%$ | Total | $\%$ | Total | $\%$ |
| Triangle | 3 | 30.00 | 12 | 12.00 | 43 | 4.30 | 139 | 1.39 |
| Square/Rhombus | 2 | 20.00 | 9 | 9.00 | 30 | 3.00 | 99 | 0.99 |
| Centred 9-gonal | 1 | 10.00 | 4 | 4.00 | 14 | 1.40 | 46 | 0.46 |
| Centred Hexagon | 1 | 10.00 | 5 | 5.00 | 17 | 1.70 | 57 | 0.57 |
| Star | 0 | 00.00 | 3 | 3.00 | 12 | 1.20 | 40 | 0.40 |
| Cube | 1 | 10.00 | 3 | 3.00 | 9 | 0.90 | 20 | 0.20 |
| Grand Total | 8 | 80.00 | 36 | 36.00 | 125 | 12.50 | 401 | 4.01 |

TABLE 2

Such number/shape relationships are absolutes - unmanipulable and completely independent of place, time and of the things represented. They thus provide a reliable means of judging a number's significance. A picture based upon these principles speaks powerfully of having been intelligently and intentionally designed.

## 3. Alphabetic numeration - the Hebrew Scheme ${ }^{2}$

This dates from c. 200 BC and possibly follows an earlier Greek model:

| Place: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Letter: | * | 2 | $\pm$ | 7 | 7 | 7 | 1 | $\Gamma$ | $\cdots$ |
| Name: | aleph | beyt | gimel | dalet | hey | vav | zayin | het | tet |
| Numeral: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Place: | 10 | 11 |  | 12 | 13 | 14 |  | 15 | 16 |
| Letter: | 4 |  |  |  | $3 \square$ | ] |  | 8 | 17 |
| Name: | yud | kap |  | lamed | mem | nun |  | amech | ayin |
| Numeral: | 10 | 20 |  | 30 | 40 | 50 |  | 60 | 70 |
| Place: | 17 |  | 8 | 19 |  | 20 |  | 21 | 22 |
| Letter: | 20 |  |  | $p$ |  | 7 |  | 2 | 1 |
| Name: | pey |  | dey | quph |  | resh |  | hin | tav |
| Numeral: | 80 |  | 90 | 100 |  | 200 |  | 00 | 400 |

Table 3
Observe that five of the 22 letters have 'end-forms'; these (here represented in red) were used instead of the standard forms when terminating a word. However, it is most important to note that while this feature may be of interest to Cabbalists, it has no place here. In other words, in normal practice either form might be used to represent a given numeral ${ }^{3,4}$.

## 4. The numerical reading of the Bible's first seven words



Figure 1

The reading is from right to left. Observe that the values representing the letters are recorded above the text, and the word-values (the sums of their constituent letters), below.

## 5. Numerical structure revealed in Genesis $\mathbf{1 : 1}$



Figure 2

The sum of the first five words (the 'supernatural' component)

$$
\begin{gathered}
=913+203+86+401+395=1998=3 * 666=3 * \mathrm{~T}(36) \\
\text { Words } 1 \text { and } 3 \text { total } 913+86=999
\end{gathered}
$$

Words 2, 4 and 5 total 203+401+395 =999
The sum of words 6 and 7 (the 'natural' component)

$$
=407+296=703=T(37)
$$

Verse total

$$
=1998+703=2701=T(73)
$$

Observe that each of the highlighted numbers appear in the foregoing construct, and that each is a multiple of 37 . This leads to the uncovering of more figurate numbers, viz. 37 and 73 (factors of the verse total 2701), and 19 (factor of 703).

## 6. The figurate features of $\mathbf{1 9 , 3 7}$ and 73



Figure 3

Thirty-seven is the only known example of a prime number which possesses three visuallydistinct symmetrical manifestations: it is therefore said to be trifigurate.

Its digital reflection 73 is also prime and figurate - and geometrically related to 37 in two ways:


Figure 4

Here, we see 73-as-hexagram, first with 37-as-hexagram inset (a), and again with 37-ashexagon inset (b). Since 37 and 73 are the factors of 2701, each of these constructs represents a concise numerical summary of Genesis 1:1.
$703,37^{\text {th }}$ member of the triangular series is the product of the two primes 19 and 37 ; these (like the factors of 2701) are both figurate and geometrically related, thus:


Figure 5

At (a) we see 37-as-hexagon with 19-as-hexagon inset; and at (b), 37-as-hexagram with 19-as-hexagon inset. Each is a numerical picture of the Hebrew words translated 'and the earth'. Interestingly, Figure 4(a) accommodates 5(b) precisely; this suggests that Earth was to be the central feature of God's creation.
7. Basic numerical pictures of Genesis $\mathbf{1 : 1}$


Figure 6

$$
\begin{gathered}
666=1+2+3+\ldots+34+35+36=\mathrm{T}(36) \\
703=\mathrm{T}(36)+37=\mathrm{T}(37) \\
2701=1+2+3+\ldots+71+72+73=\mathrm{T}(73)=3 * \mathrm{~T}(36)+\mathrm{T}(37)
\end{gathered}
$$

A second geometrical expression of 2701 as a composite may be obtained by replacing the three triangles of 666 with two parallelograms of 999 (interestingly, the symbol '666' rotated through $180^{\circ}$ ). Observe that this trapezium $=T(91)-T(54)$; top and bottom rows are triangles, $55=\mathrm{T}(10)$ and $91=\mathrm{T}(13)$; sides $=37=\mathrm{H}(4)=\mathrm{S}(3)$


Figure 7

## 8. The numerical reading of the Bible's first eight words

Because the first word of the second verse (Genesis 1:2) has a significant part to play in these proceedings, it is here included in the following reading of the opening numbers:


Figure 8

## 9. A view of the augmented structure



Figure 9

We see that the inclusion of word 8 has added to the figurate content of the verse. Such sizable numbers are not common; consequently, to find a cluster emanating from the augmented first verse of a large compilation of Hebrew text is surely most significant. It clearly suggests intent. In other words, its Author must have known full well what He was about; indeed, as we look further into this matter, we shall find further overwhelming evidence of purposeful design.

## 10. A composite picture of the augmented structure

Observe that these five figurate numbers residing within the Bible's first eight Hebrew words possess the following features:

- each arises from an unbroken sequence of words
- they are numerically related - and are all subservient to the verse total, 2701
- the hexagon is the self-intersection of 2701-as-triangle
- many of these features are 'one-of-a-kind'

They are incorporated in the following composite presentation (Figure 10)


Figure 10


## Figure 11

Observe that the $8^{\text {th }}$ word serves two functions: the white component of its background indicating that it participates with words $4,5,6$ and 7 in forming the total 1801 (the $25^{\text {th }}$ centred hexagon), and the blue indicating that, in itself, it forms a perfect plinth or underscore for the $73^{\text {rd }}$ triangle (representing Genesis 1:1).

Note again that these numbers, expressed symbolically in the usual manner as denary objects, provide no hint of the underlying and related symmetries of the absolute forms depicted. [This probably explains why these phenomena have remained undetected for so long.]

Observe that the coordination displayed here is quite remarkable, and hardly something that has fallen into place by chance! But there is more to consider: several of these numbers are found to be 'one-of-a-kind'. Their unique features are now examined.

## 11. Notable features of $666\left(=6 \wedge \mathbf{2}^{* 37 / 2)}\right.$

We first observe that the symbolic form of the number as it is normally expressed is a repdigit - the repeated digit 6 , the first perfect number. But of even greater significance are the hidden attributes revealed in its absolute expression as $36^{\text {th }}$ triangle.


Figure 12

Observe that all the following attributes of 666 are triangular:

$$
\begin{gathered}
\text { Number of sides = number of angles }=3=\mathrm{T}(2) \\
\text { '6' is the repeated digit; } 6=\mathrm{T}(3) \\
\text { ' } 66 \text { ' is seen in the symbol ' } 6666^{\prime} ; 66=\mathrm{T}(11) \\
36=\text { length of side = number of rows }=\mathrm{T}(8) \\
105=\text { number of counters forming outline }=\mathrm{T}(14) \\
10=\text { base of denary system }=\mathrm{T}(4) \\
\text { (in which this number appears symbolically as ' } 6666^{\prime} \text { ) }
\end{gathered}
$$

These features reveal 666 to be unique among the whole numbers in this respect, and well-deserving of the title 'epitome of triangularity'. Clearly, its appearance in the Bible's last book as a God-chosen identifier is significant, viz. "Here is wisdom. Let him who has
understanding count the number of the beast, for it is the number of a man: his number is 666." (Rev.13:18)

## 12. Notable features of $\mathbf{1 8 0 1}$ (prime)



Figure 13

This figure is unique in the Hexagon series for the following reasons:
It is generated as the self-intersection of 2701-as-triangle and is dimensioned thus:

$$
\begin{gathered}
\text { Number of rows }=49=7^{\wedge} 2 \\
\text { Length of side }=25=5^{\wedge} 2 \\
\text { Outline }=144=12^{\wedge} 2
\end{gathered}
$$

These attribute: all squares; and further, $7+5=12$

## 13. Notable features of 703 (= 19*37)

Observe that this number is formed as the sum of words 6 and 7 - each of which is a multiple of 37. Together, they represent the 'natural' component of the Creation. Word 7 (translated 'earth') has the value 296 ( $=8 \times 37$ ) - and, most appropriately, we find this to be a factor of both Name and Title of the Lord Jesus Christ - as found in New Testament Greek ${ }^{5}$, thus:

| 1 | 2 |
| :---: | :---: |
|  |  |
| T7000G TOLOTOC |  |
| JESUS | CHRIST |
| 888 | 1480 |
| $=24 \times 37=3 \times 296$ | $=40 \times 37=5 \times 296$ |
| THE LORD |  |
| 2368 |  |
| $=64 \times 37=8 \times 296$ |  |

Figure 14

## 14. Notable features of $2701(=37 * 73)$

Attributes of interest arise from its denary representation:

- its factors are reflective
- when 2701 is added to 1072 (the number obtained by reversing its digits), the result is a concatenation of these factors, viz. 3773; no other number has been found to meet this specification

As an absolute,

- both triangular and trapezium forms have a cubic outline, thus: $3^{*} 72=216=6^{\wedge} 3$. And, since 6 is first perfect number, 2701 is one of an exceedingly sparse subset of triangles having outlines which are the cubes of perfect numbers
- this cube is unique in that its superficial area is numerically equal to its volume:


Figure 15

- as a Centred 9-gonal (or G-triangle) it has a central counter located at the $25^{\text {th }}$ position on the $49^{\text {th }}$ row - these markers, the squares of 5 and 7
- further powerful evidence for the singularity of 2701 arises from another quarter: a consideration of its factors leads to its further visual expression as a compound 'Star of stars': either as 73 unit stars of 37 , or 37 unit stars of 73

The first of these is depicted here:


Figure 16

Clearly, the total represented is $73 \times 37$, or 2701 .
Continuing in this format (but, for the sake of simplicity representing the constructional units in solid colour), we find several significant word-sums appearing as symmetrical patterns, thus:

At 17(a), we see an innermost hexagon of star units of value 19*37 (= 703) closely confined by an outline hexagon of $18 * 37(=666)$; the remainder of the figure has $36 * 37$ (=2*666)

At 17(b), the innermost hexagram of units has the total value $13 * 37$ ( $=481$ ), i.e. the sum of the words translated 'God' and 'heaven'); the outer outline hexagram has $24 * 37$ (=888); as we have already discovered (Figure 14) this, appropriately, represents the Name 'Jesus'; the outer hexagram has $36 * 37(=1332=2 * 666)$


Figure 17

To summarise thus far: The Bible's opening verse, read numerically, may be depicted as a symmetrical structure in at least four distinct ways. This leads to the understanding that 2701 as a figurate number, possessing the additional attributes listed above, is certainly 'one of a kind' in the sense that no other number radiates such a plethora of geometrical attributes. Central to this realisation is the fact that 2701 is a unique member of an exceedingly sparse subset of the natural numbers which are both Centred 9-gonals and Star-of-stars. APPENDIX 2 provides details of this proof.
15. The evaluation of the universal constant $\pi$ from the Genesis $1: 1$ data

Pi is obtained (correct to 5 significant figures) by using the simple formula:

Product of letters $\times$ Number of letters
Product of words $\times$ Number of words

$$
\begin{aligned}
& =\frac{2.3887872 \times 10^{34} \times 28}{3.0415352 \ldots \times 10^{17} \times 7} \\
& =3.141554509 \ldots \times 10^{17}
\end{aligned}
$$

Observe that $3.141554509 \ldots$ underestimates
$\pi(=3.141592654 \ldots$..) by a mere $0.0012 \%$

Details of the calculation may be found in APPENDIX 3.

## A REVIEW OF THIS RESULT

Let us first observe that any estimate of $\pi$ that is obtained as the ratio of two integers must, necessarily, be an approximation. It is appropriate that we derive a handle on the kind of odds against this result being a chance happening. Here are the first 10 digits of 'estimate: true value' for $\pi$ with matching significant digits underlined:

### 3.141554509:3.141592654

Clearly, $\pi$ is seen to be correct to 5 significant figures. Based upon a random distribution of the variables (a not unreasonable assumption in the circumstances), a simple estimate of the probability of this event may therefore be obtained as follows:

Since the first digit in each case could have been any one of nine in the range 1-9, and each of the remaining matching digits, any one of ten in the range $0-9$, this event is associated with a probability of $1 / 90,000$; and because it represents the most significant of the physical constants, the final assessment must argue heavily against its occurring fortuitously.

## 16. Conclusions

The inquiries pursued in these pages reveal that a unique Numerical Cryptogram inhabits the Bible's opening words. Clearly, this collection of 'visual aids' and other persuasive numerical phenomena cannot be the result of a chance concatenation of Hebrew letters; neither can they be the work of some enthusiastic and highly gifted scribe; rather (because the words anticipate, by a millennium or so, the advent of Hebrew alphabetic numeration), they represent a standing miracle (i.e. one that endures); a miracle devised by our Creator Himself as a fitting introduction to this 'Maker's Manual' - the Bible.

Genesis 1:1 is thus revealed as the most remarkable combination of words ever written, and a wonder of the world; it is the REAL ex nihilo 'Big Bang', providing incontrovertible evidence of (1) the divine authorship of the Judeo-Christian Scriptures, (2) the existence of the supernatural, and (3) the reality of the spiritual warfare in which all mankind is engaged. (Eph.6:11-18).

The Bible speaks of itself through the words of the apostle Paul to Timothy: "All scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness: ..." (2Tm.3:16). Observe that the Cryptogram heads this body of inspired scripture and represents a powerful instrument of correction!

While these developments - which uphold the clarity and authority of God's Word - should convey heartening news to all who, by faith, already believe that "In the beginning God
created the heaven and the earth...", for those who don't - who maintain that all that is claimed to be true must be tested and proved by reason alone - this paper offers a thoughtprovoking challenge.

There is a sense in which the Cryptogram may be said to complete God's word to man, for it arises from the same Source, and establishes its veracity.

## The Ultimate Assertion has truly become the Ultimate Christian Apologetic! ${ }^{6}$

## Vernon Jenkins MSc

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1. TORAH or PENTATEUCH - The first five books of Moses (GENESIS, EXODUS, LEVITICUS, NUMBERS, and DEUTERONOMY)
2. Taken from Georges Ifrah's exhaustive work The Universal History of Numbers [ISBN 186046324 X], p. 215
(This authoritative book was included in The American Scientist's list of '100 or so Books that shaped a Century of Science'.)
3. (Ibid) Ifrah says "So for numbers from 500 to 900 , the customary solution was to combine the letter tav (=400) with the letters expressing the complement in hundreds." (p.216)
4. (Ibid) Ifrah continues "(These numbers) could also be represented by the final forms of the letters (taken in order). However, this notation... was adopted only in Cabbalistic calculations. So, in ordinary use, these final forms of the letters simply had the numerical value of the corresponding non-final forms of the letters." (p.217) 5. Details of the Greek system of alphabetic numeration may be found in APPENDIX 1. This is taken from Ifrah's book, The Universal History of Numbers, p. 220.
5. Further details of these and related phenomena may be found in Vernon Jenkins' book The Second Edge: A Role for Numerical Coincidence in the Pursuit of Truth. [ISBN 9781526 205193] and in his websites
www.whatabeginning.com and www.otherbiblecode.com

## APPENDIX 1 - The Greek Scheme of Alphabetic Numeration

| Place | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Letter | $A \alpha$ | $B \beta$ | $\Gamma \gamma$ | $\Delta \delta$ | $E \varepsilon$ | $Z \zeta$ | $H \eta$ | $\Theta \theta$ |
| Name | Alpha | Beta |  | Gamma | Delta | Epsilon | Zeta | Eta |
| Theta |  |  |  |  |  |  |  |  |
| Numeral | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 9 |
| Place | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Letter | $I t$ | $K \kappa$ | $A \lambda$ | $M \mu$ | $N v$ | $\Xi \xi$ | $O o$ | $\Pi \pi$ |
| Name | lota | Kappa Lambda | Mu | Nu | $\chi_{i}$ | Omicron | Pi |  |
| Numeral | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| Place | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Letter | $P \rho$ | $\Sigma \sigma \varsigma$ | $T \tau$ | $Y v$ | $\Phi \phi$ | $X \chi$ | $\Psi \psi$ | $\Omega \omega$ |
| Name | Rho | Sigma | Tau | Upsilon | Phi | Chi | Psi | Omega |
| Numeral | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |

## Table A1/1

Observe that the numerals 6 and 90 are missing from this table; this is because the associated letters, digamma and koppa, became obsolete. It appears the use of Greek alphabetic numeration was common by the end of the fourth century $B C$.

## APPENDIX 2 - 2701: Establishing its Singularity

First, a word on the subject of numerical triangles - the simplest of all figurate numbers.
Here is a representation of the first eight terms of the triangle series:


Figure A2/1
The early terms of the Triangle series
All figurate number series are associated with a generating formula. For triangles that formula is $T(n)=n^{*}(n+1) / 2-$ where $n$ represents the order number of the figure, i.e. its position within the series. Observe that every member of the triangle series represents the sum of a sequence of whole numbers, beginning with one; also, that every third member, beginning with the first (which is said to be degenerate, since it is not obviously triangular), has a central (or centroid counter - here rendered white). Such are termed generator, or Gtriangles because they have the ability to create a hexagon/star pair ( $\mathrm{H} / \mathrm{S}$ ) by self-intersection/self-union.
This is made clear in the next diagram where we observe first, $\mathrm{T}(10)=55$ uniting with an inverted copy of itself to yield the pair $37 / 73$, i.e. $\mathrm{H}(4) / \mathrm{S}(4)$ and again, $\mathrm{T}(7)=28$ generating the pair $19 / 37$, i.e. $\mathrm{H}(3) / \mathrm{S}(3)$ by the same means. However, triangles are again involved in the basic structures of these figures. Such are appropriately termed elemental or e-triangles and, in the foregoing instances are $\mathrm{T}(3)=6$ and $\mathrm{T}(2)=3$, respectively.

In general, we may express the composition of each of these related figures as follows,
G (the generator triangle) $=9^{*} \mathrm{e}+1$
H (the hexagon) $=6^{*} \mathrm{e}+1$
$S$ (the six-pointed star) $=12^{*} \mathrm{e}+1$
Returning to the matter in hand, we have observed that 2701 (the numerical reading of the Bible's first Hebrew verse) may be expressed absolutely in a variety of ways: (a) as the $73^{\text {rd }}$ triangle $\mathrm{T}(73)$; (b) as the trapezium $\mathrm{Z}(91,54)$ - i.e. $\mathrm{T}(91)-\mathrm{T}(54)$; (c) as the constellation $K(73,37)$ - i.e. a compound star comprising 73 units of 37 ; and, (d) as the constellation $K(37,73)$ - i.e. a compound star comprising 37 units of 73 .
Confining our attention to the Triangle and Constellation forms of 2701, we see that the figures depicted in the following diagram capture the essential principles involved in the generation of 2701 and its analogues:


Figure A2/2
The essential structure of related Star and Hexagon

Observe,
(1) The triangular form of 2701 is the product $\mathrm{H}^{*} \mathrm{~S} 1(=37 * 73)$
(2) The constellation form of 2701 is the product $\mathrm{S} 1 * \mathrm{~S} 2$
(3) The corresponding elemental triangles are e1 (=6) and e2 (=3)
(4) The hexagon central to $\mathrm{S} 1=\mathrm{H}=\mathrm{S} 2$, [i.e. $6^{*} \mathrm{e} 1+1=12^{*} \mathrm{e} 2+1$ ]; hence e1 = $2^{*} \mathrm{e} 2$.

This is the criterion which determines all analogues of 2701
(5) Clearly, we need to identify instances of the phenomenon $T(j)=2 * T(i)$, in the general triangle series; here are the first 5 solutions: (clearly, such triangle pairs are not common!)

| $n$ | $T_{i}$ | $T_{j}=2 T_{i}$ | $i$ | $j$ |
| ---: | ---: | ---: | ---: | ---: |
| 1 | 3 | 6 | 2 | 3 |
| 2 | 105 | 210 | 14 | 20 |
| 3 | 3570 | 7140 | 84 | 119 |
| 4 | 121278 | 242556 | 492 | 696 |
| 5 | 4119885 | 8239770 | 2870 | 4059 |

TABLE A2/3
Examples of the $T(j)=2 * T(i)$ phenomenon

We now have the ability to generate the figures associated with each of these triangle pairs, thus:

| n | Larger Star <br> $[\mathrm{S} 1]$ | Smaller Star <br> $=$ Hexagon <br> $[\mathrm{S} 2=\mathrm{H}]$ | 2701 and analogues <br> $[\mathrm{S} 1 . \mathrm{S} 2=\mathrm{S} 1 . \mathrm{H}]$ |
| :---: | ---: | ---: | ---: |
| 1 | 73 | 37 | 2701 |
| 2 | 2521 | 1261 | 3178981 |
| 3 | 85681 | 42841 | 3670659721 |
| 4 | 2910673 | 1455337 | 4236010111801 |
| 5 | 98877241 | 49438621 | 4888354443324661 |

TABLE A2/4
Numbers with both T and K characteristics

Observe that 2701 is the only number in this group that satisfies, in addition, the further attributes,

1) the triangle has a cubic outline
2) its factors are reflective
3) and are displayed when the usual symbolic representation of the number is reversed and added to the original.

Clearly, over the extensive range considered, 2701 is unique, and we may surely extend this conclusion to embrace the entire range of whole numbers.

## APPENDIX 3 －Details of the $\pi$ Calculation

Here is the required formula：

$$
\pi=(\mathrm{NL} \times \mathrm{PL}) /(\mathrm{NW} \times \mathrm{PW})
$$

where NL＝number of letters，and NW＝number of words PL＝product of letters，and PW＝product of words
This formula is now applied to the numerical reading of the Hebrew of Genesis 1：1． The tabulated results that follow represent the first stage of the＇letter products＇ calculation；each number in the coloured column is the product of the letters found in the individual words．These have yet to be multiplied together to yield the desired＇product of letters＇required by the formula．

| 部萝－筧 <br>  | $=480,000,000$ |
| :---: | :---: |
| 2． $\operatorname{NOM}_{203}>2 \times 200 \times 1$ | $=400$ |
|  | $=60,000$ |
| 莒－ <br>  | $=400$ |
|  | $=24,000,000$ |
| $\stackrel{f}{8}-\sigma$ <br> 6．$\underset{407}{\boldsymbol{\Omega} \boldsymbol{\chi}}>6 \times 1 \times 400$ | $=2,400$ |
|  | $=90,000$ |

## Table A3／1

$$
\begin{aligned}
& \mathrm{PL}=48 \times 4 \times 6 \times 4 \times 24 \times 24 \times 9 \times 10^{27} \\
&= 2.3887872 \times 10^{34} \\
& \mathrm{PW}=913 \times 203 \times 86 \times 401 \times 395 \times 407 \times 296=3.041535258 \times 10^{17}
\end{aligned}
$$

Since the number of letters is 28 ，and the number of words 7 ，we are now able to apply the formula，thus：

$$
\pi=\left(28 \times 2.3887872 \times 10^{34}\right) /\left(7 \times 3.041535258 \times 10^{17}\right)
$$

$=3.14155 \times 10^{17}$ ，i．e．a good approximation of $\pi(=3.14159 \ldots)$ appears ．


[^0]:    *An earlier, peer-reviewed version of this paper appeared a quarter of a century ago: Creation Ex Nihilo Tech.J.,vol.7(2), 1993, pp.184-196. Much has been discovered in the meantime, and is included here.

